Development of a paediatric coblation adenotonsillectomy service

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Background

Intracapsular coblation adenotonsillectomy is an increasingly popular procedure with potential governance implications relating to cost and training. We present a service improvement project in which we introduced coblation surgery for children with recurrent tonsillitis or obstructive sleep apnoea.

Training & Supervision

The procedure was presented at the local New Procedure committee meeting. Each surgeon attended a one day course and was supervised for the first 20 cases.

Methods

An observational study was carried out comparing surgical outcomes of paediatric patients undergoing tonsillectomy or adenotonsillectomy with conventional (round one) and coblation techniques (round two). Outcomes were recorded retrospectively for 125 consecutive cases in round one from May 2016. Following introduction of the coblation service data was prospectively collected for the first 125 patients undergoing coblation procedures in round two from May 2017.

The primary outcomes recorded were length of stay, readmission rate and complication rate. Delayed discharge was defined as a patient who met the criteria for day case procedure who required overnight admission or a patient who did not meet the day case criteria requiring an inpatient stay of two nights or more.

To evaluate the effectiveness of the coblation technique, the parents of a subset of patients undergoing coblation procedures completed the OSA-18 symptom score pre-op and post op. carried out.

Complications

Delayed Discharge

After the introduction of coblation, the rate of delayed discharges due to pain, bleeding or food refusal reduced significantly (12%; 3.2%; Fisher’s exact test p=0.015). Delayed discharges due to desaturation in OSA was unchanged.

Post operative haemorrhage

There was a significant reduction in the post-operative haemorrhage rate (12%; 1.6%; Fisher’s exact test p=0.0017).

Readmission

There was a non-significant reduction in the rate of readmission due to infection or pain (3.2%; 1.6%, p=0.6837).

Subset analysis of 20 patients in the coblation group revealed a significant reduction in symptom scores from pre-op to post-op (Wilcoxon-signed-rank rest p<0.0001).

Conclusion

Delayed Discharge

The protocol of training and supervision facilitated introduction of a new surgical technique to our department with reduced complications